

# PERSUAPs

Status, opportunities and  
challenges

# To do a PERSUAP

- Research of completed PERSUAPs
- Websources for pesticides, labels, bees, etc.
- Local crop, health and pest resources
- EPA and USAID resources

# Regulation 216 requirements

## Critical issues

- Registrations: local, US
- Selection criteria
- IPM choices available
- Application safety
- Cautions: health, env
- Non-target organisms
- Water resource care
- Provision for training
- Effectiveness of choices
- Availability of alternatives
- Pesticide management
- Provision for monitoring

# Other Critical Issues

- RUP vs GUP
- Treaties: POPs, PIC
- Export restrictions
- Eurogap
- Use criteria: Price, Availability, Efficacy, Safety, Environment, etc.

# Important Issues

- Small versus large holder
- Importation
- Test for efficacy
- Registration
- Test for Active Ingredient
- Control Sale
- Biodiversity
- POPs
- PIC
- IPM Program Plan
- No Spray in Parks
- No-spray Buffer
- Scouting and Monitoring
- Risks to human health
- Acute exposure
- Chronic exposure
- Soil contamination
- Effects on surface and ground water
- Pesticide drift
- Effects on non-target organisms
- Effects on honey bees
- Fishery and bird losses
- Wildlife losses
- Disruption of natural control
- Pesticide resistance
- Economic losses of human health, environmental impact
- Manufacturing quality control
- Import quality control
- Illegal importation
- Dealer licensing
- Availability of rural input retail outlets
- Poor quality pesticide containers
- Reuse of containers
- Manufacturing, repackaging, occupational exposure

# More Issues

- Adulteration & dilution of pesticides
- Poor quality labels that fall off or in foreign language
- Poor quality sprayers that leak
- ULV advantages: less water, quicker, use light breeze, not walk through, light weight
- Labels without toxicity or first aid antidote information
- Subsidies or credit for inputs
- Restricted entry interval (REI)
- Preharvest interval (PHI)
- Homemade botanicals including nicotine
- Certificates of competence for applicators (like RUP), spray professionals
- Phytosanitary issues-weeds, crop residues
- Identify key pests for each crop, primary and secondary
- Very dangerous pesticides
- Toxicology color codes for dangers
- Transshipment
- Warehouse storage conditions
- Disposal
- Monitoring, scouting, and pest recognition
- Calibration, nozzles
- Mixing
- Cleanup-water, soap, rinsate
- Not afford safety equipment
- Safety equipment too hot for tropics, subtropics
- Keep out of reach of children
- Bioaccumulation up food chain to humans
- First aid
- Selectivity: specific versus broad spectrum pesticide
- Schedule sprays without monitoring

# Agriculture PERSUAP History

- Benin, mid 1990s (first)
- Kenya PERUSAP, 2001, 3 more
- Uganda PAMP, 2001, amend 2003
- Zambia, 2002
- Rwanda PERSUAP, 2003
- Nigeria (IITA) PERSUAP, 2003
- Angola PERSUAP, 2004
- Colombia PERSUAP, 2003
- Ecuador PERSUAP, 2004
- Jordan, 2004
- Eritrea (limited)
- Madagascar (NGOs)
- Mozambique
- Bolivia
- Nicaragua
- Guatemala
- El Salvador

# Health PERSUAP History

- Mozambique, 2001
- Malawi, 2001
- Rwanda, 2001, amend 2004
- Zambia, 2002
- Kenya, 2002
- Nigeria, 2003
- Senegal, 2003
- Ghana, 2003
- Uganda, 2003
- Ethiopia, 2004
- DRC (limited)
- Eritrea (limited)
- Madagascar (NGOs)

# Jordan PERSUAP

- Keep it simple and to the point
- Do not add filler
- Make the recommendations simple to understand and implement
- Make a definite timeline for implementation

## **Primary Websites for Pesticide Searches:**

<http://www.pesticideinfo.org> (PAN most complete pesticides database)

<http://extoxnet.orst.edu/pips/ghindex.html> (Exttoxnet Oregon State database)

<http://www.epa.gov/ecotox/> (EPA Ecotox Database)

<http://cfpub.epa.gov/oppref/rereg/status.cfm?show=rereg> (EPA Registr. Eligib. Decisions)

[http://www.epa.gov/pesticides/biopesticides/ai/all\\_ais.htm](http://www.epa.gov/pesticides/biopesticides/ai/all_ais.htm) (EPA regulated biopesticides)

<http://www.epa.gov/opppmsd1/RestProd/rupjun02.htm> (EPA restricted use pesticides)

[http://www.epa.gov/pesticides/health/tox\\_categories.htm](http://www.epa.gov/pesticides/health/tox_categories.htm) (EPA Toxicity Classifications)

<http://www.epa.gov/opppmsd1/PPISdata/index.html> (EPA pesticide product information)

<http://www.chemfinder.camsoft.com> (chemical database & internet search, free & fee)

<http://www.hclrss.demon.co.uk/index.html> (compendium of pesticide common names)

## **CABI Site for Crop Protection Compendium (CPC)**

<http://www.cabi.org/compendia/cpc/index.htm> to enter CABI CPC for crop/pest recs.

## **Pesticide Toxicity to Honey Bees**

<http://www.entm.purdue.edu/Entomology/ext/targets/e-series/EseriesPDF/E-53.pdf>

<http://www.ohioline.osu.edu/hyg-fact/2000/2161.html> (Ohio State Extension site)

## **Pesticide Toxicity to Natural Enemies (Beneficials)**

<http://www.ipm.ucdavis.edu/PMG/r108900111.html>

## **Biological Pesticides List**

<http://www.koppert.com> (a Dutch biologicals company doing business internationally)

<http://www.biobest.be> (a Belgian biologicals company doing business internationally)

[http://www.epa.gov/pesticides/biopesticides/ai/all\\_ais.htm](http://www.epa.gov/pesticides/biopesticides/ai/all_ais.htm) (EPA's biopesticide list)

# Report Outline

- Background: Crops, pests, pesticides
- Pesticide Evaluation Report (PER): the 12 Regulation 216 elements analysis & Recommendations
- Synthesis tables for all pesticides
- Safe Use Action Plan (SUAP): Timelined implementation plan of recommendations of the PER

Generic name of Pesticide (or accepted common name)/EPA and Jordan ACB Status	IPM program	Toxicological and Environmental Hazards	Primary concerns
1. Fungicides			
<p><b>Copper hydroxide</b>; Registered-USEPA. Toxicity Class I Highly Toxic DANGER-Poison;</p> <p>Registered in Jordan.</p> <p>Soil treatment for <i>Fusarium</i> and damping off diseases.</p>	<p>Monitoring to detect onset of disease; field counting or other detection methods. Correct target disease ID, treating only at disease threshold level.</p>	<p>Easily absorbed through skin. Corrosive to mucous membranes and cornea. Irritates eyes, skin, and respiratory tract. Causes stomach pain, nausea, and vomiting.</p> <p>Kills aquatic crustaceans and mollusks.</p> <p>Persistent chemical; not broken down in environment.</p>	<p>Potential impacts to humans.</p> <p><b>Special concern:</b> Careful when using near surface water; kills crustaceans and mollusks.</p> <p>Be careful around endangered crustacean and mollusk species.</p>

# Future Challenges for PERSUAPs

- SUAP implementation
- Imperfect pesticide databases
- Constantly changing registration status
- Dealing with activity uncertainties
- How to stay flexible w/ changing crops, etc
- Chronic risks for kids, pregnant women
- Weak host-country regs, enforcement
- Compliance after PACD
- Misperception of PERSUAP as a “fill in the blanks” document